

RAW SEQUENCE LISTING

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Application Serial Number: 10/822,231
Source: FFWO
Date Processed by STIC: 11-16-04

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IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/822,231

DATE: 11/16/2004

TIME: 12:18:31

Input Set : A:\A-71386-8.ST25.txt

Output Set: N:\CRF4\11162004\J822231.raw

3 <110> APPLICANT: Lazar, Gregory Alan
 4 Chirino, Arthur J.
 5 Dang, Wei
 6 Desjarlais, John R.
 7 Doberstein, Stephen Kohl
 8 Hayes, Robert J.
 9 Karki, Sher Bahadur
 10 Vafa, Omid
 12 <120> TITLE OF INVENTION: OPTIMIZED Fc VARIANTS AND METHODS FOR THEIR GENERATION
 14 <130> FILE REFERENCE: A-71386-8
 16 <140> CURRENT APPLICATION NUMBER: US 10/822,231
 17 <141> CURRENT FILING DATE: 2004-03-26
 19 <150> PRIOR APPLICATION NUMBER: US 10/672,280
 20 <151> PRIOR FILING DATE: 2003-09-26
 22 <150> PRIOR APPLICATION NUMBER: US 60/477,839
 23 <151> PRIOR FILING DATE: 2003-06-12
 25 <150> PRIOR APPLICATION NUMBER: US 60/467,606
 26 <151> PRIOR FILING DATE: 2003-05-02
 28 <150> PRIOR APPLICATION NUMBER: US 60/442,301
 29 <151> PRIOR FILING DATE: 2003-01-23
 31 <150> PRIOR APPLICATION NUMBER: US 60/414,433
 32 <151> PRIOR FILING DATE: 2002-09-27
 34 <160> NUMBER OF SEQ ID NOS: 308
 36 <170> SOFTWARE: PatentIn version 3.2
 38 <210> SEQ ID NO: 1
 39 <211> LENGTH: 451
 40 <212> TYPE: PRT
 41 <213> ORGANISM: Homo sapiens
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 50 20 25 30
 53 Tyr Met Asn Trp Val Arg Gln Pro Pro Gly Arg Gly Leu Glu Trp Ile
 54 35 40 45
 57 Gly Phe Ile Arg Asp Lys Ala Lys Gly Tyr Thr Thr Glu Tyr Asn Pro
 58 50 55 60
 61 Ser Val Lys Gly Arg Val Thr Met Leu Val Asp Thr Ser Lys Asn Gln
 62 65 70 75 80
 65 Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
 66 85 90 95
 69 Tyr Cys Ala Arg Glu Gly His Thr Ala Ala Pro Phe Asp Tyr Trp Gly
 70 100 105 110

(pg. 6)

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73 Gln Gly Ser Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
74      115      120      125
77 Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
78      130      135      140
81 Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
82 145      150      155      160
85 Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
86      165      170      175
89 Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
90      180      185      190
93 Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
94      195      200      205
97 Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
98      210      215      220
101 Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
102 225      230      235      240
105 Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
106      245      250      255
109 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
110      260      265      270
113 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
114      275      280      285
117 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
118      290      295      300
121 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
122 305      310      315      320
125 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
126      325      330      335
129 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
130      340      345      350
133 Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
134      355      360      365
137 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
138      370      375      380
141 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
142 385      390      395      400
145 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
146      405      410      415
149 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
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158      450
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162 <211> LENGTH: 227
163 <212> TYPE: PRT
164 <213> ORGANISM: Homo sapiens
166 <400> SEQUENCE: 2

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168 Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
169 1          5          10          15
172 Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
173          20          25          30
176 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
177          35          40          45
180 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
181          50          55          60
184 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
185 65          70          75          80
188 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
189          85          90          95
192 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
193          100          105          110
196 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
197          115          120          125
200 Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
201          130          135          140
204 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
205 145          150          155          160
208 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
209          165          170          175
212 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
213          180          185          190
216 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
217          195          200          205
220 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
221          210          215          220
224 Pro Gly Lys
225 225
228 <210> SEQ ID NO: 3
229 <211> LENGTH: 213
230 <212> TYPE: PRT
231 <213> ORGANISM: Homo sapiens
233 <400> SEQUENCE: 3
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239 Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Ile
240          20          25          30
243 His Trp Phe Gln Gln Lys Pro Gly Ser Ser Pro Lys Pro Trp Ile Tyr
244          35          40          45
247 Ala Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser
248          50          55          60
251 Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Glu Ala Glu
252 65          70          75          80
255 Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Thr Ser Asn Pro Pro Thr
256          85          90          95
259 Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
260          100          105          110

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263 Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
264      115      120      125
267 Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
268      130      135      140
271 Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu
272 145      150      155      160
275 Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
276      165      170      175
279 Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
280      180      185      190
283 Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
284      195      200      205
287 Asn Arg Gly Glu Cys
288      210
291 <210> SEQ ID NO: 4
292 <211> LENGTH: 451
293 <212> TYPE: PRT
294 <213> ORGANISM: Homo sapiens
296 <400> SEQUENCE: 4
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302 Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
303      20      25      30
306 Asn Met His Trp Val Lys Gln Thr Pro Gly Arg Gly Leu Glu Trp Ile
307      35      40      45
310 Gly Ala Ile Tyr Pro Gly Asn Gly Asp Thr Ser Tyr Asn Gln Lys Phe
311      50      55      60
314 Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
315 65      70      75      80
318 Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
319      85      90      95
322 Ala Arg Ser Thr Tyr Tyr Gly Gly Asp Trp Tyr Phe Asn Val Trp Gly
323      100      105      110
326 Ala Gly Thr Thr Val Thr Val Ser Ala Ala Ser Thr Lys Gly Pro Ser
327      115      120      125
330 Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
331      130      135      140
334 Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
335 145      150      155      160
338 Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
339      165      170      175
342 Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
343      180      185      190
346 Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
347      195      200      205
350 Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Ala Glu Pro Lys Ser Cys
351      210      215      220
354 Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
355 225      230      235      240

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```

358 Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
359           245           250           255
362 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
363           260           265           270
366 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
367           275           280           285
370 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
371           290           295           300
374 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
375 305           310           315           320
378 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
379           325           330           335
382 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
383           340           345           350
386 Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
387           355           360           365
390 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
391           370           375           380
394 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
395 385           390           395           400
398 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
399           405           410           415
402 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
403           420           425           430
406 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
407           435           440           445
410 Pro Gly Lys
411           450

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414 <210> SEQ ID NO: 5

415 <211> LENGTH: 451

416 <212> TYPE: PRT

417 <213> ORGANISM: Homo sapiens

420 <220> FEATURE:

421 <221> NAME/KEY: misc_feature

422 <222> LOCATION: (243)..(243)

423 <223> OTHER INFORMATION: Xaa can be one of the following amino acids: serine, aspartic

424 acid, glutamic acid, asparagine, glutamine or threonine

426 <220> FEATURE:

427 <221> NAME/KEY: misc_feature

428 <222> LOCATION: (244)..(244)

429 <223> OTHER INFORMATION: Xaa can be one of the following amino acids: valine, isoleucine

430 or methionine

432 <220> FEATURE:

433 <221> NAME/KEY: misc_feature

434 <222> LOCATION: (268)..(268)

435 <223> OTHER INFORMATION: Xaa can be one of the following amino acids: valine, isoleucine,

436 threonine or tyrosine

438 <220> FEATURE:

439 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/822,231

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Input Set : A:\A-71386-8.ST25.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 243,244,258,276,278,301,302,330,334,336

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

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VERIFICATION SUMMARY

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Output Set: N:\CRF4\11162004\J822231.raw

L:541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:240

M:341 Repeated in SeqNo=5